IN THE CLAIMS:

Please amend the claims as indicated below.

1.   (Original) A communication system having first communication means, second communication means and a first transmission path as well as at least one further transmission path between said first and said second communication means, in which at least the first communication means are provided with transmission means for each of said transmission paths, which are capable of sending at least part of a communication signal to the second communication means, in which at least the second communication means comprise reception means for each of said transmission paths, which are capable of receiving at least part of said communication signal, wherein the first communication means comprises:

a training generator that generates a training code to be sent to the reception means enabling the reception means to match a received signal to a corresponding transmitted signal, wherein the training generator is capable of generating a training code with at least nearly ideal cyclic auto-correlation properties such that its cyclic auto-correlation function is at least nearly zero for all cyclic shifts, in that the transmission means are capable of concurrently sending said training code in a mutually shifted manner and in that the reception means are capable of performing a cyclic auto-correlation with respect to a received training signal.

2.   (Original) Communication system according to claim 1, wherein the reception means are capable of generating the cyclic shifts of a received training code and to correlate these with said training code.

3.   (Original) Communication system according to claim 1, wherein the training code comprises a concatenation of the rows of a Fourier matrix.

4.   (Original) Communication system according to claim 3, wherein the training code has a length which is equal to the number of transmission paths or an integer multiple thereof.

5.   (Cancelled).

6.   (Original) Communication system according to claim 1,wherein the training codes are preceded and followed by a dummy code during operation.

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7.   (Original) Communication system according to claim 1, wherein the training generator comprises a pre-correction filter for processing the training codes.

8.   (Original) Communication system according to claim 1, wherein the

10   training generator comprises storage means for storage one or more training codes.

9.   (Original) Communication system according to claim 1, wherein the training generator during operation, issue a number of at least substantially identical training codes and in that the receiving means comprise summation means to average the received

15   training codes.

10.   (Original) Communication system according to claim 1, wherein the training generator at least during operation, issue at least substantial training codes at a substantially fixed interval and in that the reception means are provided with auto-correlation

20   means for correlating a received signal with one or more signals received after a delay corresponding to said interval or an integer multiple thereof.

11.   (New) A method for training a receiver in a communication system, comprising the steps of:

25   generating a training code with at least nearly ideal cyclic auto-correlation properties such that its cyclic auto-correlation function is at least nearly zero for all cyclic shifts; and

            transmitting said training code.

12.   (New) A transmitter in a communication system, comprising:

a memory; and

at least one processor, coupled to the memory, operative to:

generate a training code with at least nearly ideal cyclic auto-correlation

5   properties such that its cyclic auto-correlation function is at least nearly zero for all cyclic shifts; and

transmit said training code.

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